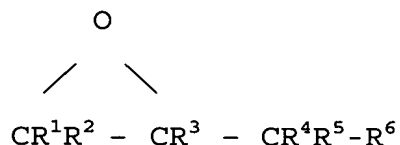


I CLAIM:

1. A pigment composition comprising:

pigment particles, and an epoxy compound for surface
treating the pigment particles, the epoxy compound having
a general formula:



wherein R^1 , R^2 , R^3 , R^4 and R^5 are each, independently,
hydrogen, or substituted or unsubstituted alkyl, or,
 R^2 and R^4 may be taken together to form a 5-7 membered
ring, and

R^6 is hydrogen, $-\text{OOCR}^7$, $-\text{OR}^8$, $-\text{OOC}-\text{CR}^9=\text{CR}^{10}\text{R}^{11}$, a monoepoxy
or polyepoxy group containing diphenyl, phenyl, or
substituted or unsubstituted alkyl or cycloalkyl, or
a monoepoxy or polyepoxy group containing a polyether
group,

R^7 , R^8 , R^{10} and R^{11} are each, independently, hydrogen,
substituted or unsubstituted alkyl, substituted or
unsubstituted aryl, or substituted or unsubstituted
alkenyl,

R^9 is hydrogen, or alkyl,

with the proviso that the epoxy compound has no
silicon-containing group.

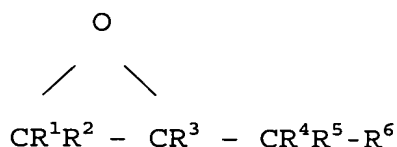
2. The pigment composition as claimed in Claim 1, wherein
the epoxy compound has an epoxy equivalent weight of
less than 1000.

3. The pigment composition as claimed in Claim 1, wherein the epoxy compound is selected from a group consisting of glycidyl ethers, glycidyl esters, cycloaliphatic epoxy compounds, and cycloaliphatic diepoxy compounds.

5 4. The pigment composition as claimed in Claim 1, wherein the epoxy compound is selected from a group consisting of glycidyl methacrylates and glycidyl acrylates.

5. A pigment dispersion comprising:

10 a dispersing agent, and pigment particles dispersed in the dispersing agent, the pigment particles being treated with an epoxy compound having a general formula:



15 wherein R^1 , R^2 , R^3 , R^4 and R^5 are each, independently, hydrogen, or substituted or unsubstituted alkyl, or R^2 and R^4 may be taken together to form a 5-7 membered ring, and

20 R^6 is hydrogen, $-\text{OOCR}^7$, $-\text{OR}^8$, $-\text{OOC}-\text{CR}^9=\text{CR}^{10}\text{R}^{11}$, a monoepoxy or polyepoxy group containing diphenyl, phenyl, or substituted or unsubstituted alkyl or cycloalkyl, or a monoepoxy or polyepoxy group containing a polyether group,

25 R^7 , R^8 , R^{10} and R^{11} are each, independently, hydrogen, substituted or unsubstituted alkyl, substituted or unsubstituted aryl, or substituted or unsubstituted alkenyl,

R⁹ is hydrogen, or alkyl,
with the proviso that the epoxy compound has no
silicon-containing group.

6. The pigment dispersion as claimed in Claim 5, wherein
the epoxy compound has an epoxy equivalent weight of
less than 1000.

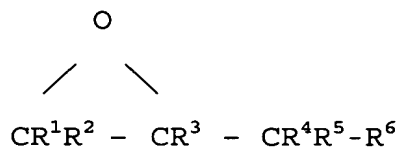
7. The pigment dispersion as claimed in Claim 5, wherein
the epoxy compound is selected from a group consisting
of glycidyl ethers, glycidyl esters, cycloaliphatic epoxy
compounds, and cycloaliphatic diepoxy compounds.

8. The pigment dispersion as claimed in Claim 5, wherein
the epoxy compound is selected from a group consisting
of glycidyl methacrylates and glycidyl acrylates.

9. A method of surface treating pigment particles,
comprising:

mixing the pigment particles with an epoxy compound in
the presence of a solvent to form a slurry; and
causing the pigment particles to react with the epoxy
compound at an elevated temperature,

wherein the epoxy compound has a general formula



wherein R¹, R², R³, R⁴ and R⁵ are each, independently,
hydrogen, or substituted or unsubstituted alkyl, or R²
and R⁴ may be taken together to form a 5-7 membered ring,
R⁶ is hydrogen, -OOCR⁷, -OR⁸, -OOC-CR⁹=CR¹⁰R¹¹, a monoepoxy

or polyepoxy group containing diphenyl, phenyl, or substituted or unsubstituted alkyl or cycloalkyl, or a monoepoxy or polyepoxy group containing a polyether group,

5 R^7 , R^8 , R^{10} and R^{11} are each, independently, hydrogen, substituted or unsubstituted alkyl, substituted or unsubstituted aryl, or substituted or unsubstituted alkenyl,

R^9 is hydrogen, or alkyl,

10 with the proviso that the epoxy compound has no silicon-containing group.

10. The method as claimed in Claim 9, wherein the epoxy compound has an epoxy equivalent weight of less than 1000.

15 11. The method as claimed in Claim 9, wherein the epoxy compound is selected from a group consisting of glycidyl ethers, glycidyl esters, cycloaliphatic epoxy compounds, and cycloaliphatic diepoxy compounds.

20 12. The method as claimed in Claim 9, wherein the epoxy compound is selected from a group consisting of glycidyl methacrylates and glycidyl acrylates.

13. The method as claimed in Claim 9, further comprising the step of removing the solvent and drying the pigment particles treated with the epoxy compound.

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